

What is claimed is:

1. A stereoscopic imaging system, comprising:
a display arranged to display separate images, one
representing a right eye portion of a stereoscopic image,
and the other representing a left eye portion of the
stereoscopic image;
polarizers arranged to oppositely polarize the left
and right eye images;
an image interlacing arrangement for combining the
oppositely polarized left eye and right eye images; and
polarizing filters for enabling respective right and
left eyes of a person to view the corresponding oppositely
polarized and interlaced left and right eye images.
2. A stereoscopic imaging system as claimed in claim 1,
wherein the image interlacing arrangement includes:
a microprism sheet including a substrate and a
plurality of grooves having intersecting sides that form a
v-shape, the sides of the grooves forming first and second
sets of substantially planar surfaces,
wherein said sides of the grooves are respectively
arranged to refract light from first and second image
sources so that said light from said first and second image
sources exits said microprism sheet in parallel to form an
interlaced image.

3. A stereoscopic imaging system as claimed in claim 2, wherein said first and second image sources are separate regions of a single image display screen.
4. A stereoscopic imaging system as claimed in claim 3, wherein said single image display screen is an LCD screen.
5. A stereoscopic imaging system as claimed in claim 2, wherein said first and second image sources are separate image display screens.
6. A stereoscopic imaging system as claimed in claim 2, wherein one of said image sources is an image source other than a display screen.
7. A stereoscopic imaging system as claimed in claim 2, wherein said first and second image sources display said left and right eye images captured by image capture devices situated at positions corresponding to positions of a viewers eye.
8. A stereoscopic effects device, comprising:
an image interlacing arrangement including
at least one video display screen;

Sub 1
B1

a microprism sheet including a substrate and a plurality of grooves having intersecting sides that form a v-shape, the sides of the grooves forming first and second sets of substantially planar surfaces,

wherein said sides of the grooves are respectively arranged to refract light from first and second image sources so that said light from separate first and second images on said video display screen exits said microprism sheet in parallel to form an interlaced image;

polarizers situated between said video display screen and said microprism sheet; and

polarized filters situated between said microprism sheet and respective left and right eyes of a person.

9. A stereoscopic effects device as claimed in claim 8, wherein said microprism sheet, polarizers, and polarized filters are situated in a common housing.

10. A stereoscopic effects device as claimed in claim 9, wherein said housing is a housing of a handheld video game player.

11. A stereoscopic effects device as claimed in claim 10, wherein said video display screen is an LCD screen.

SEARCHED INDEXED
SERIALIZED FILED

- Sub D3 end*
12. A stereoscopic effects device as claimed in claim 8, wherein said video display screen is an LCD screen.
 13. A microprism sheet, comprising a plurality of parallel facets defined by grooves having intersecting sides that form a v-shape, wherein dimensions of said facets vary between a center of a sheet and edges of said sheet.
 14. A microprism sheet as claimed in claim 13, wherein a size of said facets increases towards the edges of said sheet.
 15. A microprism sheet, comprising a plurality of parallel facets defined by grooves having intersecting sides that form a v-shape, wherein said sheet is non-planar.
 16. A microprism sheet as claimed in claim 15, wherein dimensions of said facets vary between a center of a sheet and edges of said sheet.
 17. A microprism sheet as claimed in claim 16, wherein a size of said facets increases towards the edges of said sheet.

18. A stereoscopic imaging method, comprising the steps of:

displaying separate images, one representing a right eye portion of a stereoscopic image, and the other representing a left eye portion of the stereoscopic image;

oppositely polarizing the left and right eye images;

combining the oppositely polarized left eye and right eye images; and

using polarizing filters to enabling respective right and left eyes of a person to view the corresponding oppositely polarized and interlaced left and right eye images.

19. A stereoscopic imaging method as claimed in claim 18, wherein the step of combining the images comprises the step of interlacing the images using an image interlacing arrangement that includes:

a microp prism sheet including a substrate and a plurality of grooves having intersecting sides that form a v-shape, the sides of the grooves forming first and second sets of substantially planar surfaces,

wherein said sides of the grooves are respectively arranged to refract light from first and second image sources so that said light from said first and second image sources exits said microp prism sheet in parallel to form an interlaced image.

20. A stereoscopic imaging method, comprising the steps of:

capturing left eye and right eye portions of an image; and

transmitting the left and right eye portions of the image to an image display device for display as separate images which can be polarized and combined following display to form an interlaced, oppositely polarized image that, when viewed through polarizing lenses, will exhibited a stereoscopic effect.